

## Monday

8:20 am – 9:40 am	Morning Poster Session <b>Particles and Arrays</b> (Session Chair: Dave Pappas) <b>Magnetic Memory &amp; Logic</b> (Session Chair: Nick Rizzo) <b>Magnetic Semiconductors</b> (Session Chair: Robert Stamps)
9:40 am – 9:50 am	Introductory Remarks by the Symposium Chair  <b>Magnetic Memory &amp; Logic</b> Session Chair: Nick Rizzo
9:50 am – 10:30 am	KLAUS H. PLOOG (invited) “ <i>Magnetic logic with MnAs films as base for programmable computing with a single magnetoresistive element</i> ”
10:30 am – 10:50 am	JEFFREY B. KORTRIGHT “ <i>Interparticle magnetic correlations in dense Co nanoparticle assemblies</i> ”
10:50 am – 11:10 am	Coffee Break
11:10 am – 11:30 am	V. USOV “ <i>Epitaxial growth and magnetic properties of Fe nanowedge islands on Mo(110)</i> ”
11:30 am – 12:10 pm	RUSSEL COWBURN (invited) “ <i>Nanometer scale magnetic logic structures for information processing</i> ”
12:10 pm – 1:10 pm	Lunch  <b>Magnetization Dynamics</b> Session Chair: Robert Stamps
1:10 pm – 1:50 pm	ALEXANDRA MOUGIN (invited) “ <i>Ultraslow and ultrafast dynamic using Kerr microscopy</i> ”
1:50 pm – 2:10 pm	JEFFREY McCORD “ <i>stroboscopic wide-field Kerr microscopy on ferromagnetic film elements</i> ”
2:10 pm – 2:30 pm	M. BUESS “ <i>Spin dynamics in Permalloy disks with vortex structure</i> ”
2:30 pm – 2:50 pm	Coffee Break
2:50 pm – 3:10 pm	URSULA EBELS “ <i>Precessional reversal studies in continuous soft layers</i> ”
3:10 pm – 3:30 pm	JOO-VON KIM “ <i>Magnetization dynamics of spin-valves with spin-pumping</i> ”
3:30 pm – 3:50 pm	R. HERTEL “ <i>Spin wave meets domain wall – a micromagnetic study on phase manipulation and controlled interferences of propagating spin waves in thin ferromagnetic strips</i> ”
3:50 pm – 4:30 pm	SERGEJ DEMOKRITOV (invited) “ <i>Symmetry breaking by soliton formation in active magnetic rings</i> ”
4:30 pm – 6:00 pm	Afternoon Poster Session <b>Transport Properties I</b> (Session Chair: Patricia Sparks) <b>Magnetic Tunnel Junctions I</b> (Session Chair: Stefan Maat) <b>Patterned Structures</b> (Session Chair: Mark Covington)

## Tuesday

8:20 am – 9:50 am

Morning Poster Session

**Exchange Coupled Systems I** (Session Chair: Burkard Hillebrands)

**Spin Momentum Transfer: Dynamics** (Session Chair: Bret Heinrich)

**Thermal Effects** (Session Chair: Mark Stiles)

### **Thermal Effects**

Session Chair: Mark Stiles

9:50 am – 10:30 am

*GERRIT BAUER* (invited)

“*Metallic thin film transistors*”

10:30 am – 10:50 am

*S. SORIANO*

“*Two helices magnetic arrangement induced by clamping effect in (110)Eu films.*”

10:50 am – 11:10 am

Coffee Break

11:10 am – 11:30 am

*M. VAN KAMPEN*

“*Critical behavior of Fe/V(001) superlattices: the influence of fractionality and interlayer coupling*”

11:30 am – 12:10 pm

*BOB CAMLEY* (invited)

“*Tunable thermal hysteresis in magnetic multilayers: magnetic superheating and supercooling*”

12:10 pm – 1:10 pm

Lunch

### **Interlayer Coupling I**

Session Chair: Bret Heinrich

1:10 pm – 1:50 pm

*BOB STAMPS* (invited)

“*Exchange anisotropies in model systems*”

1:50 pm – 2:10 pm

*M. YE. ZHURAVLEV*

“*Exchange coupling of two ferromagnets separated by a tunneling barrier with impurities*”

2:10 pm – 2:30 pm

*D.E. BÜRGLER*

“*Magnetic interlayer coupling and transport properties of epitaxial semiconductor interlayers*”

2:30 pm – 2:50 pm

Coffee Break

2:50 pm – 3:10 pm

*ULRICH NOWAK*

“*Asymmetric reversal modes and coercive fields in exchange bias systems*”

3:10 pm – 3:30 pm

*PETER KAPPENBERGER*

“*Direct imaging and determination of the uncompensated spin density in exchange-biased systems by MFM*”

3:30 pm – 3:50 pm

*JÜRGEN T. KOHLHEPP*

“*Oscillatory magnetic interface exchange coupling observed in epitaxial fct-Mn(001)/Co(001)*”

3:50 pm – 4:30 pm

*WOLFGANG KUCH* (invited)

“*Magnetic interface coupling in single-crystalline FM-AF bilayers and FM-AF-FM trilayers*”

4:30 pm – 6:00 pm

Afternoon Poster Session

**Dynamics: Fundamental Properties I** (Session Chair: Ursula Ebels)

**Magnetic Tunnel Junctions II** (Session Chair: Evgeny Tsymbal)

**Transport Properties II** (Session Chair: Steve Russek)

## WEDNESDAY

8:20 am – 9:50 am

Morning Poster Session  
**Exchange Coupled Systems II** (Session Chair: Matt Carey)  
**Recording Media** (Session Chair: Roy Chantrell)  
**Microscopy** (Session Chair: Jacques Miltat)

### **Spin Momentum Transfer: Dynamics**

Session Chair: John Slonczewski

9:50 am – 10:30 am

ILYA KRIVOROTOV (invited)  
“*Dynamics of nanomagnets driven by spin polarized currents*”

10:30 am – 10:50 am

MAXIM TSOI  
“*Current-driven excitations in magnetic multilayers*”

10:50 am – 11:10 am

Coffee Break

11:10 am – 11:30 am

MARK COVINGTON  
“*Spin momentum transfer in spin valves*”

11:30 am – 12:10 pm

BILL RIPPARD (invited)  
“*Spin-transfer-induced precessional dynamics in nanocontacts*”

12:10 pm – 1:10 pm

Lunch

### **Magnetic Tunnel Junctions III**

Session Chair: Roy Chantrell

1:10 pm – 1:50 pm

TARO NAGAHAMA (invited)  
“*Spin-polarized resonant tunneling for various magnetic electrodes*”

1:50 pm – 2:10 pm

W. H. WANG  
“*Spin polarization of single-crystalline Co<sub>2</sub>MnSi films grown by PLD on GaAs(001)*”

2:10 pm – 2:30 pm

C. H. KANT  
“*Thermal stability of tunneling spin polarization*”

2:30 pm – 2:50 pm

Coffee Break

2:50 pm – 3:10 pm

K.D. BELASHCHENKO  
“*Spin-dependent tunneling from the oxidized Co surface: Julliere's formula and effect of interface bonding*”

3:10 pm – 3:30 pm

KYUNG-IN JUN  
“*Enhancement of TMR with the MTJs inserting an amorphous nonmagnetic FeZr layer*”

3:30 pm – 3:50 pm

A. T. HINDMARCH  
“*Spin-polarized tunneling into a reduced-T<sub>c</sub> 3d ferromagnet*”

3:50 pm – 4:30 pm

NICK RIZZO (invited)  
“*A new toggle switching method used in a 4 Mbit magnetoresistive random access memory*”

4:30 pm – 6:00 pm

Afternoon Poster Session  
**Dynamics: Finite Size Effects** (Session Chair: Sergej Demokritov)  
**Instrumentation** (Session Chair: Jacques Miltat)  
**Spin Momentum Transfer: Switching** (Session Chair: John Slonczewski)

## THURSDAY

8:20 am – 9:50 am

Morning Poster Session

**Half Metallics** (Session Chair: Michael Pechan)

**Surfaces and Interfaces I** (Session Chair: Jeff Kortright)

**Materials I** (Session Chair: Taro Nagahama)

### **Recording Media and Thermal Effects**

Session Chair: Richard Dee

9:50 am – 10:30 am

DAVID SELLMYER (invited)

“*High-anisotropy nanocluster films for future high-density recording*”

10:30 am – 10:50 am

S. E. RUSSEK

“*Thermal fluctuations in nanomagnetic devices*”

10:50 am – 11:10 am

Coffee Break

11:10 am – 11:30 am

M. A. I. NAHID

“*Magnetic properties and structure of  $(Fe_{100-x}Co_x)_3Pt$  thin films*”

11:30 am – 12:10 pm

CHRIS BAJOREK (invited)

“*Practical perpendicular magnetic recording media for greater than 130 Gb/in<sup>2</sup> data storage*”

12:10 pm – 1:10 pm

Lunch

### **Spin Momentum Transfer: Switching**

Session Chair: Jordan Katine

1:10 pm – 1:50 pm

TERUO ONO (invited)

“*Current-driven domain wall motion in magnetic nanowires*”

1:50 pm – 2:10 pm

T. DEVOLDER

“*Ultra-fast magnetization reversal in magnetic nanopillars by spin polarized current*”

2:10 pm – 2:30 pm

J. SLONCZEWSKI

“*Currents, torques, and disorder in tunnel junctions*”

2:30 pm – 2:50 pm

Coffee Break

2:50 pm – 3:10 pm

K. YAKUSHIJI

“*Spin accumulation effect on spin-dependent single-electron tunneling in ferromagnetic nanoparticles*”

3:10 pm – 3:30 pm

C. H. MARROWS

“*Diffusive current spin polarization measured by domain wall resistance in epitaxial L1<sub>0</sub> FePd films*”

3:30 pm – 3:50 pm

S. J. STEINMULLER

“*Highly efficient spin filtering of ballistic electrons in hybrid spin valve/semiconductor structures*”

3:50 pm – 4:30 pm

JACQUES MILTAT (invited)

“*Current driven switching in nanowires and platelets with large aspect ratio*”

4:30 pm – 6:00 pm

Afternoon Poster Session

**Materials II** (Session Chair: Taro Nagahama)

**Fundamental Properties** (Session Chair: Marek Przybylski)

**Surfaces and Interfaces II** (Session Chair: Gary Mankey)

6:00 pm – 10:30 pm

Banquet at the Omni Interlocken Resort

## FRIDAY

8:20 am – 9:50 am

Morning Poster Session

**Interlayer Coupling II** (Session Chairs: Bill Bailey & Daniel Bürgler)

**Dynamics: Fundamental Properties II** (Session Chairs: Martin van Kampen)

### **Spin Dynamics**

Session Chair: Bill Bailey

9:50 am – 10:30 am

HERMANN A. DÜRR (invited)

*“Ultrafast electron and spin dynamics in nanoscale magnetic systems”*

10:30 am – 10:50 am

ROLF ALLENSPACH

*“Magnetic domain walls in constrained geometries”*

10:50 am – 11:10 am

Coffee Break

11:10 am – 11:30 am

LIESBET LAGAE

*“Increased Gilbert damping in spin valve and magnetic tunnel junction devices”*

11:30 am – 12:10 pm

BRET HEINRICH (invited)

*“Spin pumping in magnetic multilayers”*

12:10 pm – 1:10 pm

Lunch

### **Spin Dynamics: Structures**

Session Chair: Bob Camley

1:10 pm – 1:50 pm

MARK STILES (invited)

*“Current-induced magnetization precession in thin films and multilayers”*

1:50 pm – 2:10 pm

S. K. ARORA

*“Antiphase boundaries-induced exchange coupling in epitaxial Fe<sub>3</sub>O<sub>4</sub> thin films”*

2:10 pm – 2:30 pm

C. M. SCHNEIDER

*“Accessing micromagnetic dynamics in Permalloy microstructures on the 100 picosecond scale”*

2:30 pm – 2:50 pm

Coffee Break

2:50 pm – 3:10 pm

S. PARK

*“Buried interface study of FeCo/GaAs epitaxial heterostructures using polarized neutron reflectometry”*

3:10 pm – 3:30 pm

N. BERDUNOV

*“Case study of spin-polarized tunneling transport across a magnetite interface”*

3:30 pm – 3:50 pm

E. KRAVTSOV

*“Proximity effect of vanadium on spin-density wave magnetism in thin Cr films”*

3:50 pm – 4:30 pm

V. CROS (invited)

*“Current induced domain wall motion in spin valve stripes”*

4:30 pm – 4:40 pm

Coffee Break

4:40 pm – 5:30 pm

JAN GOLS (Patent Examiner, European Patent Office)

*“International Patent Law and The Spintronics Industry”*

5:30 pm – 5:40 pm

Final Statements by Symposium Chair